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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,712	08/21/2006	David Srodzinski	65493(50024)	3705
21874 7590 06/03/2009 EDWARDS ANGELL PALMER & DODGE LLP P.O. BOX 55874 BOSTON, MA 02205				
EXAMINER				
CORRIELUS, JEAN B				
ART UNIT		PAPER NUMBER		
2611				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/577,712

Applicant(s)

SRODZINKSI, DAVID

Examiner

Jean B. Corielus

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-16 is/are rejected.
7) ☒ Claim(s) 17-25 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 02 May 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/8500)
Paper No(s)/Mail Date 8/7/06
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 6, 7 and 17-25 are objected to because of the following informalities: claim 6 recites a "second predetermined pulsewidth" however there no limitation to a "first predetermined pulsewidth". Claim 7 recites "the first predetermined pulsewidths" while the antecedent in claim 5 recites the "first predetermined pulsewidth". Please correct. Claim 17, line 1 "suitable" should be deleted. The dependency of claim 21, should be changed from 17" to "20" so as to provide antecedent basis for the first clock pulse and the one or more phase delayed clock pulses recited in claim 25. In addition, the purpose of the "internal signal", recited in claim 21, is not clear. the dependency of claim 22 should be changed to "21" so as to provide antecedent basis for "the internal signal" the dependency of claim 23 should be changed to "22" so as to be consistent with the recitation first and second electronic means recited in claims 21 and 22 and to provide antecedent basis for "second electronic means recited in claim 25. Note that any claim whose base claim is objected is likewise objected.

Appropriate correction is required.

Drawings

2. The drawings are objected to because "Figure" should be replaced by "FIG." in each occurrence. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The

figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1, 3, 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Berger US Patent No. 5,687,200.

As per claim 1, Berger teaches a method and apparatus comprising an information carrying signal fig. 2B that comprises a plurality of data pulses see fig. 2B that exhibit a range of pulsewidths and which are generated by a transmitter 28 for transmission through a propagation medium 30, the method comprising the step of introducing one or more sub-pulses P1 (fig. 2B) to one or more of the plurality of data

pulses prior to the information carrying signal entering the signal propagation medium 30 wherein a pulsewidth of each of the one or more sub-pulses is less than a minimum pulsewidth of the plurality of data pulses as shown in fig. 2 B the pulse width of P1 is less than the pulse widths of signal 24/52.

As per claim 3, as shown in fig. 2B, the introduction of the subpulse is timed so that the subpulse is contained within one of the plurality of data pulses.

As per claim 9, Berger teaches that a subpulse P1 is introduced for each frame see col. 2, lines 37-38 in suggesting that the number of pulse introduced is directly dependent upon the pulsewidth of the associated data pulse.

As per claim 10, Berger teaches that a subpulse P1 is introduced for each frame see col. 2, lines 37-38 in suggesting the pulsewidth of the subpulse P1 is dependent upon the pulsewidth of the associated data pulse.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger US Patent no. 5,687,200.

As per claim 2, Berger teaches every feature of the claimed invention but does not teach the amplitude of the one or more sub-pulses is of an opposite sign to an amplitude of an associated data pulse. However, such limitation does not involve any

inventive step. It would have been obvious to one skill in the art to have modified Berger in such a way as to provide the amplitude of the subpulse with opposite polarity than an amplitude of an associated data pulse so as to provide an efficient means to differentiate data pulse from the subpulse.

As per claim 4, the applied reference does not teach the additional limitation recited in claim 4. However, it would have been obvious to one skill in the art to introduce the subpulse in such a way as to coincide with one or more edges of the plurality of data pulse and the motivation to do so would have been the same as provided above with respect to claim 2.

As per claim 8, it would have been obvious to one skill in the art to introduce a subpulse at variable timing so as to be consistent with design parameter of the system.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 1-16 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent¹ and recent Federal Circuit decisions² indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the

¹ *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

² *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

instant claim recites a series of steps or acts to be performed, the claim neither transforms underlying subject matter nor is positively tied to another statutory category that accomplishes the claimed method steps, and therefore does not qualify as a statutory process. For example the method including step of introducing is of sufficient breadth that it would be reasonably interpreted as a series of steps completely performed mentally, verbally or without a machine. The claim fails to recite any corresponding hardware in combination with the method step(s) so as to effectively tie the process claim with a statutory class of invention, i.e. a particular apparatus. The same analysis applied equally to claims 2-16.

Allowable Subject Matter

9. Claims 17-25 would be allowable if amended to overcome the objection set forth above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Monday-Thursday from 9:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jean B Corrielus/
Primary Examiner
Art Unit 2611